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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,796	12/07/2001	Nobuaki Tomori	299002053600	7303

25226 7590 03/24/2004  
MORRISON & FOERSTER LLP  
755 PAGE MILL RD  
PALO ALTO, CA 94304-1018

EXAMINER

GOSSAGE, GLENN A

ART UNIT PAPER NUMBER

2187

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/010,796

Applicant(s)

TOMORI ET AL.

Examiner

Glenn Gossage

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,6,13,14 and 16 is/are allowed.
- 6) ☒ Claim(s) 2-5, 7-12, 15 and 17-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A new title such as --  
NONVOLATILE DATA MANAGEMENT SYSTEM AND METHOD USING A PLURALITY  
OF DATA SEGMENTS AND LINK INFORMATION-- is suggested (see claim 1, lines 1  
and 15-22 and claim 23, lines 1 and 3-10, for example). The loss in brevity of title is  
more than offset by the gain in its informative value in indexing, classifying, searching,  
etc. See MPEP 606 and 606.01.
3. The abstract of the disclosure is objected to because it is too long (greater than the  
newer 150 word or 15 line limit) and does not enable one to quickly determine from a  
 cursory inspection the nature and gist of the technical disclosure as required by 37 CFR  
1.72(b). Initially, it appears an introductory sentence such as --A data management  
system and method use link information stored in a plurality of data segments. The-- for  
clarity and completeness (see claim 23, e.g.).  
Also, it appears "capable of storing data" in line 3 (page line 5); "for controlling ...  
section" in lines 4-5 (page lines 6-7); and "via the storage control section" in lines 16-17  
(page lines 18-19) should be deleted for brevity. Similarly, in lines 9-10 (page lines 11-  
12), it appears "which ... wherein the" should be changed to simply -- . The--.

Also, in lines 3 and 11 (page lines 5 and 13), it appears ":" (the colon" should be deleted. In line 12 (page line 14), it appears "by" reads more clearly here as --in--.

Appropriate correction is required. See MPEP § 608.01(b).

4. The drawings are objected to because in Figure 9, within step 211, it appears the question mark should be deleted (note page 74, lines 1-2 and also note step 219).

Also, it appears Figures 13-29 should be labeled --Prior Art-- (see page 6, lines 22-24; page 53, lines 18-23; and page 54, line 1 to page 55, line 9, e.g.). [Note, however, the objection in numbered paragraph 5 below with respect to page 54.]

In Figure 20, the label "512 bytes" below block 52a is somewhat confusing (note page 15, lines 18-20, e.g.).

Applicant is REQUIRED to submit a proposed drawing correction in response to this Office action. However, actual formal correction of the noted defect(s) (submission of corrected formal drawings, e.g.) can be deferred until the application is allowed by the examiner.

Also note MPEP 608.02(r) and (v).

5. The disclosure, particularly the lengthy specification, has not been checked by the Examiner to the extent necessary to determine the presence of all possible minor

errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the disclosure. The following objections are specifically noted:

**In the specification:**

On page 54, lines 4-15, the descriptions of Figures 20-23 are confusing as it is not entirely clear whether these Figures depict "Prior Art." In this regard, see page 57, lines 16-19 and 21-23; page 61, lines 4-9; and claim 61, line 20 to page 61, line 1, for example. [Should --and in the present invention-- or other similar language be inserted after "19" in lines 6, 10 and 15?]

On page 58, line 19, "256" is not entirely understood when read in conjunction with Figure 20 (which appears to show 512 bytes).

On page 66, line 10, and in similar contexts throughout the remainder of the specification, "by" appears to read more clearly here as --in--.

On page 67, line 9, it appears "an" should be --a--.

On page 70, line 18, it appears "these" reads more clearly here as --this--.

On page 71, line 22, and in similar contexts throughout the remainder of the specification, it is not entirely clear how the link information has a "multiplexed" structure (--duplicated--?). See also page 75, lines 13 and 23; page 76, lines 5 and 17; page 80, line 13; page 92, line 19; page 93, lines 6 and 24.

On page 73, the description spanning lines 5-9 is somewhat confusing. [Should --Figure 9, as well as-- be inserted before "Figures" in line 6, and "9" in line 8 changed to --6--? for clarity?] In line 16, it appears "above" should be deleted, and --(shown in

Figure 6)-- inserted after "204" for clarity. Similarly, it appears --(shown above with respect to Figure 6)-- or other similar language for clarity.

On page 74, line 4, it appears --(Figure 6)-- should be inserted after "201" for clarity. In lines 5, 13 and 23, the wording "is caused" is unclear in this context. [Should "is caused" be changed to --has occurred--?] See also page 79, lines 9 and 16; page 79, line 24 to page 80, line 1; page 81, line 13; page 82, line 24; page 86, lines 9-10 and 18-19; page 89, line 11; page 91, lines 15 and 22; page 92, line 6; and page 94, line 23, by way of example only.

On page 75, line 10, it appears "Then, the" reads more clearly here as --The-- (note the use of "Then" in line 5). See also page 80, line 12; page 87, line 5; and page 92, line 16, by way of example only. In line 12, it appears --out-- should be inserted after "read" for consistency (see line 10).

On page 77, line 23, it appears "of" (first occurrence) should be changed to --in-- for clarity. See also page 82, line 20.

On page 83, line 8, "a" should be --an--.

On page 94, line 24, it appears the passage reads more clearly with "confirmed" deleted."

On page 99, line 16 to page 103, line 12, it is not adequately clear to what the numerous different "means" refer in this instance, or how they are connected or related to each other or to the other elements or "means" set forth (what disclosed hardware and/or software components constitute the numerous "means?").

On page 105, line 15, it appears "an" should be --a--.

Again note that these are merely exemplary. The entire specification should be carefully and completely reviewed to ensure that all possible errors are located and corrected.

**In the claims:**

In claim 1, lines 4 and 16, it appears "by" reads more clearly here as --in--. In line 15, it appears "the data" should be simply --data-- for clarity (note the "data" in lines 3 and 9, e.g.). Also, it appears "immediately-previous and" in line 22 should be changed to --an immediately-previous data storage site and an--, and "sites" in line 23 changed to --site-- for clarity and consistency (note claim 6, line 5, e.g.).

In claims 2, 4, 6 and 7, line 2, and throughout the claims, it appears "data link" should be simply --link-- for clarity and consistency (note claim 1, line 21, as well as Figures 4 and 5, e.g.). See also claim 9, lines 6-7 and 13; claims 10 and 12, lines 12 and 18; claim 13, line 2; claim 16, lines 2 and 3; claim 17, lines 4 and 5; claim 18, lines 5 and 12-13; claim 20, line 4; claim 21, line 7; claim 22, line 5; claim 23, line 4; claim 24, line 12; claim 25, lines 10-11; claim 27, line 4; claim 28, lines 8, 10-11 and 16; claim 30, lines 7 and 10; claim 31, lines 3 and 4; claim 32, line 3; claim 33, lines 5 and 13; and claim 34, line 4.

Also in claim 6, lines 3 and 7, it appears "data" reads more clearly here as --information--. Similarly, it appears "the bits" should be simply --bits-- for clarity (to avoid possible antecedent problems, e.g.). See also claim 9, line 8 and claim 10, line

13. In lines 6 and 10, it appears "distributed" should be deleted for clarity and consistency. See also claim 15, line 5; claim 17, line 3; claim 20, line 4; and claim 31, line 3.

In claim 9, line 6, "of" appears to read more clearly here as --in--. See also claim 10, line 12; claim 21, line 10; claim 24, line 6; and claims 25, 28 and 30, line 10, by way of example only.

In claims 10 and 12, line 9, it appears --an-- should be inserted before "immediately" for clarity. See also claims 25 and 28, line 7.

In claim 11, line 4, it appears "to correct information" should be deleted for clarity. See also claim 26, line 3.

In claim 15, line 3, "ID" should be --identification (ID)-- for clarity. See also claim , line .

In claim 19, line 8, it appears "of distributed sectors" should be simply --sector-- for clarity. See also claim 3, line 8.

In claim 21, line 8, it appears "distributed data segment" should be --the data segments-- for clarity. See also claim 30, line 8.

In claim 23, line 3, it appears --a plurality of-- should be inserted before "data" for clarity. In line 4, it appears "each of which is" should be changed to --a sector being--. In line 6, it appears --of-- should be inserted after "which" for clarity. In line 7, it appears --about-- should be inserted after "information" for clarity. In line 8, it appears "immediately-previous and" should be changed to --an immediately-previous data storage site and an--, and in line 23, it appears "sites" should be changed to --site-- for



clarity and consistency analogous to claim 1, lines 22-23, e.g.). In lines 9-10, it appears "distributed to the sectors" should be deleted for clarity.

In claim 26, line 5, it appears "the" should be deleted for clarity (to avoid possible antecedent problems, e.g.).

Appropriate correction is required.

6. Claims 2-5, 7-12, 15 and 17-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 4, and therefore their respective dependent claims, the proper antecedent for "the block" is not clear (note the plural blocks set forth in claim 1, line 3).

In claim 7, and therefore its dependent claims, lines 3-4 and 4-5, the proper antecedents for "the information about the immediately-previous (subsequent) data storage site" are not clear (see claim 1, lines 32-33, as well as claim 6, lines 4-5 and 8-9, e.g.).

In claim 9, the proper antecedent for "the application program or operating system" is unclear. The language "application program or operating system" is also vague and indefinite as being alternative. In lines 11-12, the language "software such as an application program or an operating system" is unclear and confusing as it is not clear whether the limitations after "such as" are considered positively recited claim limitations (in this regard, note MPEP 2173.05(d)). See also claims 10 and 12, lines 5-6 and 16-

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17; claim 15, lines 4-5; and claim 22, lines 3-4; claims 25, 28 and 30, line 10, by way of example only.

In claim 10, as well as claim 12, the language (when the last sector is referred to) "while sequentially following, from the leading sector, information about immediately subsequent data storage site included in data link information stored in each sector" is unclear and confusing, particularly since there does not appear to be clear antecedent support or other explanation of such language in the specification.

In claim 17, it is not readily apparent what is meant by "appointed by" in this context. See also claim 19, line 10; claim 20, line 9; claim 21, line 6; claim 29, line 8; claim 30, line 5; claim 31, line 9; and claim 33, line 10.

In claim 19, it is not entirely clear how the "confirming" step differs from the step of "performing the confirmation." [Should --again-- be inserted after "confirmation" in line 12?]

In claim 20, it is not entirely clear what is meant by "confirming, for 'at least' each distributed data segment" here (support for language in the specification?). [Should "at least" in line 3 and "distributed" in line 4 should be deleted?]

In claim 22, the language "etc." is vague and unclear. Moreover, the language "such as an application program, operating system, etc." is unclear and confusing analogous to claim 9, lines 11-12.

In claim 23, and therefore its dependent claims, the language it is not clear how the ordinal relationship is "based on which (of) the data segments are distributed to the sectors" (all of the sectors would appear to be "distributed").

Claims 24, 25 and 28 are unclear analogous to claims 9, 10 and 12, respectively, which use similar language.

Claims 27 and 34 are unclear analogous to claim 22 which uses similar language.

Claims 29 and 30 are unclear analogous to claims 20 and 21 which use similar language.

Claims 31 and 33 are unclear analogous to claims 17 and 19 which use similar language.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Konishi et al is cited as disclosing a nonvolatile semiconductor memory device including a link table storing link information similar to the present invention.

Kodavalla et al is cited as disclosing a storage device including data divided or partitioned into a plurality of segments, each including a forward pointer and a backward pointer (see Fig. 3A, e.g.).

Nakagawa et al is cited as disclosing a nonvolatile storage device including link information for a plurality of sectors similar to the present invention.

See et al is cited as disclosing a nonvolatile semiconductor memory device including previous and next device and sector information.

Tanaka is cited as disclosing a nonvolatile memory including "front" and "rear" link information.

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Marshall et al is cited as disclosing a flash memory system including a plurality of sectors and using a plurality of sequence numbers.

Miyauchi is cited as disclosing a nonvolatile semiconductor memory device including a plurality of sectors similar to the present invention.

8. Claims 2-5, 7-12, 15, and 17-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

Claims 1, 6, 13, 14 and 16 are allowed over the prior art of record.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Gossage whose telephone number is (703) 305-3820.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (703) 308-1756.

The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703) 746-7238

(After Final Communications)

(703) 746-7239

(Official Communications)

(703) 746-5713

(Use this FAX number only after approval by the Examiner, for INFORMAL or DRAFT communications.)

  
GLENN GOSSAGE  
PRIMARY EXAMINER  
ART UNIT 2187